

**REMARKS**

Claims 1-24 are all the claims pending in the application. Claims 6-10 and 16-24 are hereby canceled without prejudice or disclaimer.

**Drawing Objections**

The Examiner objected to the drawings alleging “X” and “Y” are being claimed in relation to “ $\tan(1^\circ)$ ” and “D”, and therefore, this relationship needs to be explicitly illustrated.

In response, Applicants submit that the MPEP § 608.02(d) indicates that any structural detail this is of sufficient importance to be described should be show in the drawing. In the present claims, the structure details are indicated by the variables X, Y and D as illustrated in FIG. 4. Accordingly, Applicants submit that these are the structural features and they are clearly shown in relation to each other in FIG. 4. This is the structural detail indicated in claim 2. Furthermore, the use of  $\tan(1^\circ)$  is a relationship between the various structural elements X, Y and D.  $\tan(1^\circ)$  is a number, and there is no explicit requirement that the drawings must be to scale or illustrate specific dimensions. Moreover, as the specific values of X, Y and D change, while maintaining the recited relationship between these values, it would be improper to include numerical values in the figures.

Thus, Applicants submit the present figures adequately show the specific structural details recited. Therefore, Applicants respectfully request the Examiner withdraw this objection.

**Response to Amendment**

The Examiner alleges that the Amendment filed January 30, 2006, is objected to under 35 U.S.C. § 132(a) because it introduces new matter into the disclosure. In particular, the Examiner alleges that claims 1 and 14 have been amended to include the value 0.000291, and thus, the

amendment is not supported by the specification. Applicants point out that the value 0.000291 is the numeric value of the term “ $\tan(1^\circ)$ ” as previously recited in claims 1 and 14. Thus, no new matter has been introduced. However, Applicants amend claims 1 and 14 to replace the numeral 0.000291 with the expression  $\tan(1^\circ)$ . Therefore, Applicants submit that this rejection is in error and should be withdrawn.

**Claim Rejections - 35 U.S.C. § 112, First Paragraph**

The Examiner seems to indicate that the reason for this objection is based on the newly added matters as set forth in the Response to Amendment section of the Office Action. Applicants submit that because the amendment of “ $\tan(1^\circ)$ ” to “0.000291” is not new matter, but instead a simple mathematical result as would be recognized by one of ordinary skill in the art, this rejection is in error and should be withdrawn.

**Claim Objections**

The Examiner objected to claims 1-24 for various informalities. First, Applicants submit the objections with regard to claims 6-10 and 16-24 are moot in view of the cancellation of these claims. Additionally, Applicants submit that the present claim amendments obviate the objections to claims 1-5 and 11-15.

**Claim Rejections - 35 U.S.C. § 103(a) - Claims 1, 3, 11-14, 16 and 24**

The Examiner rejected claims 1, 3, 11-14, 16 and 24 as being unpatentable over Ichinose et al. (US 4,987,487). Applicants traverse this rejection as follows.

**Failure To Establish Prima Facie Obviousness**

The Examiner alleges that Ichinose discloses many of the features recited in claims 1 and 14, but further relies on: (1) unsupported “geometry” based on Applicants’ own disclosure; and (2) a further modification by alleging that a minimum angular separation of eyesight of 1.0 or one minute is well known.

First, despite the unsupported features imported by the Examiner in making this rejection, Applicants submit that the Examiner has failed to establish *prima facie* obviousness. In particular, the Examiner has failed to articulate any logical reason, that would have led the skilled artisan at the time of the invention to the claimed combination. In particular, the Examiner has failed to articulate any rationale for modifying the definition of a three-dimensional image based on the resolution of the eyesight of a viewer.

Furthermore, the Examiner has failed to provide objective evidence to support the rejection. Instead, the Examiner modifies a single reference until the resultant combination allegedly teaches all the features of Applicants' claims. Moreover, the reason to combined proffered by the Examiner is found only in Applicants' specification.

For example, in the rejection the Examiner allegedly derives the mathematical relationship  $1/L > 25.4 / (DIS * \tan(a)) (dpi)$  based on the disclosure of Ichinose. However, the Examiner concedes that Ichinose fails to teach the recited equation  $X (dpi) \geq 25.4 / (D * 0.000291)$ . In fact, Ichinose fails to even mention a value which corresponds to  $X (dpi)$  dots per inch in relation to the distance  $D$ . To compensate for this deficiency, the Examiner alleges that it is well-known in the art that general eyesight is 1.0, which means a minimum angular separation, is  $1/60$  degree or one minute. The Examiner plugs this value into the equation  $1/L > 25.4 / (DIS * \tan(a)) (dpi)$  to arrive at  $X \geq 25.4 / (D * 0.000291)$ . However, the resulting equation calculated by the Examiner is based on hindsight. There is simply no support within Ichinose or any other applied reference which supports the Examiners' combination of the minimum angle of separation to determine the recited equation  $X (dpi) \geq 25.4 / (D * 0.000291)$ . Nothing, other than hindsight, would lead one of ordinary skill in the art to so modify Ichinose.

Additionally, assuming for the sake of argument, that one of ordinary skill in the art would recognize the mathematical expressions derived by the Examiner and the “official notice” that eyesight is 1.0, which means a minimum angular separation, is 1/60 degree or one minute, Applicants submit that the Examiner has provided no reason to combine the minimum angle of separation with the derived mathematical expression as arranged in the claims. As a basic requirement of obviousness, the Examiner must articulate some rational basis, found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to combine the teachings as the Examiner attempts. MPEP §2143. Furthermore, the reason to combine cannot come only from Applicant’s disclosure. *In re Vaeck*, 947 F.2d 488 (Fed. Cir. 1991)

However, the Examiner has failed to provide any such reason to combine. Furthermore, the only rational basis to make the combination attempted by the Examiner comes from the Applicants’ own disclosure. Specifically, the present Application describes the study and discovery of the unrecognized problem related to the definition of a three-dimensional image and viewer fatigue. (specification, page 8, lines 15-20). As a result of this study, Applicants discovered that the visibility of the three-dimensional images had drastically reduced when the viewer significantly lacks perception of the corresponding feature points in the right and left images, which cause the fatigue. (specification, page 9, lines 2-7) Further, the Applicants discovered that to completely prevent the lack of feature points, the definition of the three-dimensional image need to be no less than the resolution by the eyesight of a viewer. (specification, pages 9 and 10).

Thus, Applicants recognized the problem of viewer fatigue and resolve this by combining the viewing geometries with the minimum viewing angle. While the Examiner appears to derive

similar equations within the rejection, Applicants submit that this is a result of hindsight analysis as the Examiner has failed to provide any rational basis to support the derived combination.

Therefore, Applicants submit that because the Examiner has failed to provide the necessary objective evidence to establish a *prima facie* case of obviousness, the rejection of claims 1, 3 and 11-14 is in error and should be withdrawn. Further, with regard to claims 16 and 24 this rejection is moot as these claims have been canceled.

**Even If Combined As Suggested Not All Claim Features Disclosed**

Second, even if modified as suggested by the Examiner, Ichinose fails to teach or suggest, at least, wherein, a definition of the three-dimensional image in the horizontal direction is no less than the resolution by the eyesight of a viewer whose midpoint between the right eye and the left eye is positioned in said three-dimensional visible range, thereby preventing a lack of feature points, as recited in claims 1 and 14.

Specifically, Ichinose does not mention or even contemplate the resolution of the eyesight of a viewer. Rather, Ichinose is directed to producing the three-dimensional image properly to a viewer who moves left or right in a horizontal direction. In particular, Ichinose detects the binocular position of the viewer using a detection means so that the proper pixel for the left eye image is always incident on the left eye and the proper pixel for the right eye image is always incident on the right eye. (col. 1, lines 60-67; col. 4, lines 10-23). Specifically, Ichinose discloses:

[T]he right and left image array control circuit 25 forms a signal for controlling an array of a combined image on the display device based on a binocular position signal as an output from the binocular or head position detecting circuit 24 which detects the binocular or head position of the viewer, and applies the signal to the multiplex circuit 23 to control a combination of the binocular signals. The resultant signal is applied to the stereoscopic display device 26 to control an array of R and L pixels on the combined image 1, as shown in FIGS. 3 or 4. Therefore, the

viewer can experience stereoscopic viewing even if he or she moves to the right or to the left.

(col. 5, lines 45-58).

Accordingly, Ichinose is directed to changing which pixels display a particular portion of the image in response to the left and right movement of a viewer. To the contrary, claims 1 and 14 are directed to the definition of an image with respect to the resolution of the eyesight of a viewer in order to prevent a lack of feature points. Consequently, the resolution of the eyesight of a viewer is not contemplated or mentioned in Ichinose. Further, assuming, *arguendo*, one of ordinary skill in the art would recognize that general eyesight is 1.0, which means the minimum angular separation is one minute, even if this is combined with Ichinose, the combination fails to disclose any relationship between the “definition of the three-dimensional image in the horizontal direction” and “resolution by the eyesight of a viewer.” In other words, Ichinose and the Examiner alleged well-known eyesight of a viewer, at most, would disclose the following:

- (1) the resolution of the eyesight of a viewer is one minute (Examiner’s contention); and
- (2) changing which pixels display left and right images based on the movement of a viewer (Ichinose).

Accordingly, there is absolutely no disclosure related to the resolution of a viewer and the definition of a three-dimensional image.

Thus, because this feature is not disclosed even if the references is modified in view of the resolution of viewer being one minute, Applicants submit claims 1 and 14 are allowable over the suggested modification of Ichinose. Additionally, Applicants submit claims 3 and 11-13 are allowable, at least because of their dependency.

**Claim Rejections - 35 U.S.C. § 103(a) - Claims 2, 4, 15 and 17**

The Examiner rejected claims 2, 4, 15 and 17 as being unpatentable over Ichinose as applied above, in further view of Isono et al. (US 5,315,377). Applicants respectfully traverse this rejection.

Because Isono, either taken alone or in combination with Ichinose, fails to compensate for the above noted deficiencies of Ichinose as discussed above, Applicants submit that claims 2, 4 and 15 are allowable by virtue of their dependency.

Thus, Applicants submit that claims 2, 4 and 15 are allowable for this at least this reason. Further, with regard to claim 17 this rejection is moot as this claim has been canceled.

**Claim Rejections - 35 U.S.C. § 103(a) - Claims 5 and 18**

The Examiner rejected claims 5 and 18 as being unpatentable over Ichinose as applied above, in further view of Chikazawa (US 5,852,512). Applicants respectfully traverse this rejection.

Because Chikazawa, either taken alone or in combination with Ichinose, Applicants submit claims 5 is allowable, at least by virtue of its dependency. Further, with regard to claim 18 this rejection is moot as this claim has been canceled.

**Claim Rejections - 35 U.S.C. § 103(a) - Claims 1, 3, 6, 8, 11-14, 16, 19, 21 and 24**

The Examiner rejected claims 1, 3, 6, 8, 11-14, 16, 19, 21 and 24 as being unpatentable over Momochi (US 5,528,429) in view of Ichinose. Applicants respectfully traverse this rejection.

Because Momich, either taken alone or in combination with Ichinose, fails to compensate for the above noted deficiencies of Ichinose as discussed above, Applicants submit claims 1 and 14 are allowable, at least for the same reasons set forth above. Additionally, Applicants submit

claims 3 and 11-13, are allowable, at least by virtue of their dependency. This rejection is moot with regard to claims 6, 8, 16, 19, 21 and 24, as these claims are canceled by this Amendment.

**Claim Rejections - 35 U.S.C. § 103(a) - Claims 2, 4, 7, 9, 15, 17, 20 and 22**

The Examiner rejected claims 2, 4, 7, 9, 15, 17, 20 and 22 as being unpatentable over Momochi (US 5,528,429) in view of Ichinose as applied to claims 1, 6, 14 and 19 above, and in further view of Isono. Applicants respectfully traverse this rejection.

Because Isono, either taken alone or in combination with Momochi and Ichinose, fails to compensate for the above noted deficiencies of Ichinose as discussed above, Applicants submit claims 2, 4, 7, 9 and 15 are allowable, at least by virtue of their dependency. This rejection is moot with regard to claims 17, 20 and 22, as these claims are canceled by this Amendment.

**Claim Rejections - 35 U.S.C. §103(a) - Claims 5, 10, 18 and 23**

The Examiner rejected claims 5, 10, 18 and 23 as being unpatentable over Momochi and Ichinose as applied to claims 1, 6, 14 and 19 above, and in further view of Chikazawa. Applicants respectfully traverse this rejection.

Because Chikazawa fails to compensate for the above noted deficiency with regard to the Momochi/Ichinose combination, Applicants submit that claim 5 is allowable, at least because of its dependency. This rejection is moot with regard to claims 10, 18 and 23, as these claims are canceled by this Amendment.

**Conclusion**

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.



The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'David P. Emery', written over a horizontal line.

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